

REMARKS

Claims 1-29 and 36-48 are pending. By this Amendment, claims 1-29 and 36-45 are amended, and claims 46-48 are added. Support for the claims can be found throughout the specification, including the original claims, and the drawings. Reconsideration in view of the above amendments and following remarks is respectfully requested.

The Office Action objected to claim 27 because of an informality. The Examiner's comments have been addressed in amending claim 27. Accordingly, the objection is obviated and should be withdrawn.

The Office Action rejected claims 1, 3, 6-7, 10-12, 25, 27-28, 36-39, and 42-45 under 35 U.S.C. §102(e) as being anticipated by Lea et al. (hereinafter "Lea"), U.S. Patent No. 6,367,941. The Declaration under 37 C.F.R. §1.131 filed herewith obviates this rejection. Accordingly, the rejection should be withdrawn.

The Office Action rejected claims 1, 5, 10-12, 16-19, 25, 27-29, 36-39, and 42-45 under 35 U.S.C. §102(b) as being anticipated by Mori, U.S. Patent No. 4,389,085. The rejection is respectfully traversed.

The Examiner states "[w]ith regard to the taps being modeled or formed by using pattern parameters determined by modeling the desired illumination pattern, the method of forming a device is not germane to the issue of patentability of the device itself," and "[t]herefore, these limitations have not been given patentable weight." However, Applicants seek to claim those tap structures that can only be practically made by being modeled. Such modeled tap structures are

not disclosed or suggested by Mori who merely discloses forming holes 14a, 14b, 14c in the cladding 12 of an optical fiber, which Mori refers to as “diffusion holes.” In order to more clearly point this out, independent claims 1, 24, 25, and 27 have been amended to claim “commercially produced optical fibers or other waveguides having modeled tap structures.” Commercial production would not be practical without the novel modeling process disclosed in the present application.

Accordingly, the rejection of independent claims 1, 25, and 27 over Mori should be withdrawn. Dependent claims 5, 10-12, 16-19, 28-29, 36-39, and 42-45, are allowable at least for the reasons discussed above with respect to independent claims 1, 25, and 27, from which they respectively depend, as well as for their added features.

The Office Action rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over Mori as applied to claim 1. The rejection is respectfully traversed.

Dependent claim 2 is allowable over Mori for at least the reasons discussed above with respect to independent claim 1, from which it respectively depends, as well as for its added features.

The Office Action rejected claims 4, 8-9, 15-17, 20-24, 26, 29, and 40-41 under 35 U.S.C. §103(a) as being unpatentable over Lea as applied to claims 1, 12, 25, and 27, and further in view of McGaffigan, U.S. Patent No. 6,031,958. The rejection is respectfully traversed.

As set forth above, the Declaration under 37 C.F.R. §1.131 filed herewith obviates the rejections over Lea. McGaffigan fails to overcome the deficiencies of Lea as McGaffigan is

merely cited to teach a cylindrical illumination pattern, tap structures extending radially in an arc or completely circular around fibers or waveguides, utilizing a laser which is coherent or a light emitting diode, incoherent visible light, and higher light output. Accordingly, the rejection should be withdrawn.

The Office Action rejected claims 13-14 under 35 U.S.C. §103(a) as being unpatentable over Lea as applied to claim 12, and further in view of Currie, U.S. Patent No. 5,465,194. The rejection is respectfully traversed.

As set forth above, the Declaration under 37 C.F.R. §1.131 filed herewith obviates the rejection over Lea. Currie fails to overcome the deficiencies as Currie is merely cited to teach a light source selectively controllable and having varying illumination powers. Accordingly, the rejection should be withdrawn.

The Office Action rejected claim 19 under 35 U.S.C. §103(a) as being unpatentable over Lea as applied to claim 12, and further in view of Pollack, U.S. Patent No. 4,935,722. The rejection is respectfully traversed.

As set forth above, the Declaration under 37 C.F.R. §1.131 filed herewith obviates the rejection over Lea. Further, Pollack fails to overcome the deficiencies of Lea as Pollack is merely cited for teaching infrared light. Accordingly, the rejection should be withdrawn.

Added independent claim 46 also defines over Mori. That is, added independent claim 46 recites that a majority of the light emitted out of the one or more optical fibers or other

waveguides does not exit out of the one or more optical fibers or other waveguides through the one or more tap structures. Mori does not disclose or suggest such features.

As set forth above, Mori discloses in Figure 7 forming holes 14a, 14b, 14c in the cladding 12 of an optical fiber. Mori refers to the holes 14a, 14b, 14c as “diffusion holes” and describes only transmission loss of light through these diffusion holes in the fiber cladding. Further, as can be seen in Fig. 18A of the present application, a shallow tap, in particular one formed only in the cladding, similar to those shown in Fig. 7A of Mori, does not result in light output only on the same side as and through the tap structure. Rather, the intensity of the light above and below the tap is of the same order of magnitude. Only when the tap structure is configured to have a relatively sharp tap angle as shown, for example, in Fig. 18B (for example, 35 degree tap angle for a multimode fiber) and Fig. 19 (for example, 50 degree tap angle for a single mode fiber) of the present application is the tap output directed substantially in one direction only and that direction is below the tap, i.e., a reflected wave that passes through the fiber itself and exits from the surface opposite the tap structure.

Accordingly, Mori fails to disclose or suggest all of the features of independent claim 46. Added dependent claims 47-48 are also allowable over Mori in view of their dependency on claim 46, as well as for their added features.

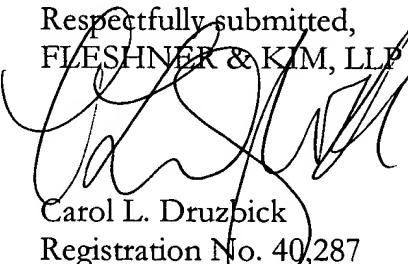
In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes

Serial No. 09/704,733
Reply to Office Action dated May 7, 2004

Docket No. ASU-0002

would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, Carol L. Druzick, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. §1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP

Carol L. Druzick
Registration No. 40,287

P.O. Box 221200
Chantilly, Virginia 20153-1200
(703) 766-3701 CLD/kah

Date: November 8, 2004

Please direct all correspondence to Customer Number 34610